MIPT Data Visualization Course

Data Visualization in Modern Machine Learning

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Motivation

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From linear model to Neural Net

- What is a binary linear classifier?

$$\hat{y}_i = sign(w^t \cdot x_i + b)$$

- Let's try make our model more complex

$$\hat{y}_i = sign(w_2^t \cdot (w_1^t \cdot x_i + b_1) + b_2) = sign(w^t \cdot x_i + b)$$

  so we've made no interesting

- Hmm, let's make nonlinear transformation

$$\hat{y}_i = sign(w_2^t \cdot (w_1^t \cdot x_i + b_1)^2 + b_2) \neq sign(w^t \cdot x_i + b)$$